

AMENDMENTS TO THE SPECIFICATION

Please amend Paragraphs [0056] and [0057] of the specification as follows:

[0056] Another technique for dealing with the settling problem is to increase the viscosity of and/or gel the electrophoretic medium, for example by dissolving a polymer in the suspending fluid cf. Application Serial No. 10/063,236, filed April 2, 2002 (Publication No. 2002/0180687) and the corresponding International Application No. PCT/US02/10267 (Publication No. WO 02/079869), thus employing the viscosity modifier aspect of the present invention. Although such an increase in viscosity will decrease the mobility of the electrophoretic particles, and hence the switching time (the time required to switch the display between its dark and light states) will be increased, a modest increase in switching time can be tolerated since the switching times of Whitehead systems can be made very low, because of the very short distances which the particles need to move between the light and dark states. (See also the discussion below regarding the use of shaped back electrodes, which offer the possibility of some countervailing reduction in switching time.) Furthermore, the aforementioned ~~Application Serial No. 10/063,236~~2002/0180687 shows that if the viscosity modifier comprises a polymer having an ~~instrinsic~~intrinsic viscosity of η in the electrophoretic medium and being substantially free from ionic or ionizable groups in the electrophoretic medium, the polymer being present in the electrophoretic medium in a concentration of from about $0.5 \eta^{-1}$ to about $2.0 \eta^{-1}$, very substantial increases in the bistability of the device can be produced at the expense of only a modest increase in switching time. A preferred polymer for use as a viscosity modifier is polyisobutylene.

[0057] A further technique for reducing, or at least deferring, the effects of particle settling is to reduce the difference in density between the electrophoretic particles and the electrophoretic medium; this approach also widens the range of materials which can be used to used in such electrophoretic particles. The density of many types of electrophoretic particles can be reduced by attaching polymer chains thereto in the

various ways described in Application Serial No. 10/063,803, filed May 15, 2002 (Publication No. 2002/0185378), and the corresponding International Application No. PCT/US02/15337 (Publication No. WO 02/093246), in accordance with the polymer coated particles aspect of the present invention. For example the aforementioned U.S. Patent No. 6,215,920 recommends using either "dyed or otherwise [light] scattering/absorptive silica particles" or "dyed or otherwise scattering/absorptive latex particles" in Whitehead systems, apparently because the low specific gravities of these materials (given as about 1.44 for silica and about 1.5 for latex particles) are tolerable for use with the low specific gravity, low viscosity fluorinated alkane electrophoretic media with which they are intended to be used. Carbon black would appear a more suitable material for the electrophoretic particles but the density of untreated carbon black may be too high to be useful in Whitehead systems. By attaching polymer chains to the carbon black, its density could be reduced sufficiently to render it useful in such systems. It is recommended that the carbon black particles have from about 1. to about 25 per cent by weight of the carbon black of the polymer chemically bonded to, or cross-linked around, the carbon black particles.